Technical Information about Sp-c-diAMPS

Analogue of the bacterial second messenger c-diAMP

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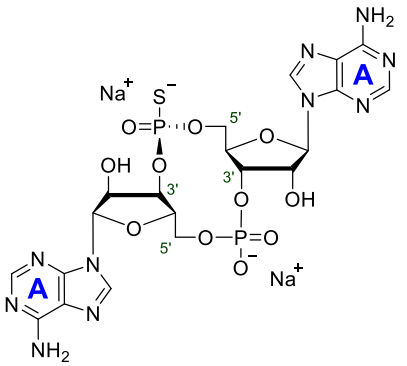

Abbreviation: **Sp-c-diAMPS**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
$C_{20}H_{24}N_{10}O_{11}P_2S$ (free acid)	[pending]	674.5 (free acid)	λ_{max} 259 nm / ε 27000 / pH 7	C 122

Name: Cyclic diadenosine monophosphorothioate, Sp- isomer

Description: Sp-c-diAMPS is the Sp-isomer of the mono-thiophosphate analogue of the bacterial second messenger c-diAMP (Cat. No. C 088). The suffix "p" indicates that R/S nomenclature refers to phosphorus.

Properties: Sp-c-diAMPS may be useful in studies on ligand-receptor interactions with c-diAMP and c-diGMP-binding proteins. The corresponding Rp-isomer Rp-c-diAMPS is also offered (Cat. No. C 121).

Specification: Crystallized or lyophilized sodium salt. Please keep in mind that equal concentrations of the compound may look different in volume due to sensitivity of the lyophilized form to humidity. The compound can even contract to small droplets. Normally the product is located in the conical bottom of the tube. Micro molar quantities are determined by UV at λ_{max}.

Purity: Typical analysis is better than 95% (HPLC / UV / 259 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: Sp-c-diAMPS is soluble in water (≥ 3 mM, limits have not been determined). Please rinse tube walls carefully and preferably use ultrasonic or vortex to achieve total and uniform mixing. When opening the tube please make sure that no substance is lost within the cap.

Stability and Storage: Sp-c-diAMPS has sufficient stability at room temperature and does not need special care during handling or shipment. Nevertheless, we recommend that the compound should be stored in the freezer, for longer storage periods preferably in freeze-dried form.

Toxicity and Safety: Please keep in mind, that the *in vivo* properties of this compound are not sufficiently characterized up to now. Avoid skin contact or ingestion and allow only trained personnel to handle the product.
Our products are designed, developed and sold for research purposes only! They are intended for *in vitro* and nonhuman *in vivo* laboratory applications. Any other use requires approval of health authorities.
Not for drug, household or related uses!

Selected References for Sp-c-diAMPS: Sp-c-diAMPS is a new structure which has been synthesized by BIOLOG Life Science Institute for the first time. There are no corresponding references available at present.

Selected References for the Monophosphorothioate Analogues of c-diGMP (c-diGMPS):

Shanahan, C.A.; Gaffney, B.L.; Jones, R.A.; Strobel, S.A., *J. Am. Chem. Soc.*, **133**, 15578 - 15592 (2011): "Differential Analog Binding by two Classes of c-di-GMP Riboswitches"

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Chen, W.; KuoLee, R.; Yan, H., *Vaccine*, **28**, 3080 - 3085 (2010): "The Potential of 3'-5'-cyclic Digunanylic Acid (c-di-GMP) as an Effective Vaccine Adjuvant"

Chen, W.X.; Patel, G.B.; Yan, H.B.; Zhang, J.B., *Hum. Vaccin.*, **6**, 706 - 714 (2010): "Recent Advances in the Development of Novel Mucosal Adjuvants and Antigen Delivery Systems"

Yan, H.; Wang, X.; KuoLee, R.; Chen, W., *Bioorg. Med. Chem. Lett.*, **18**, 5631 - 5634 (2008): "Synthesis and Immunostimulatory Properties of the Phosphorothioate Analogues of c-di-GMP"

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